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What is claimed is:

1. A compound of the formula I:

wherein stereocenters * are R or S;

dotted lines indicate that a double bond may be present or absent, and the double bond geometry may be E or Z;

R and R' are independently H or C_1 - C_{20} linear or branched alkyl or alkenyl groups that may be substituted, or functional groups like COOR₃, where R_3 = H or C_1 - C_{20} linear or branched alkyl or C_5 - C_{20} aryl; CONR₁R₂, where R₁ and R₂ may be independently or together H, linear or branched C_1 - C_{20} alkyl or C_5 - C_{20} aryl, NH₂, OH, C_1 - C_{20} linear or branched alkoxy, halo, cyano, or R+R'=O.

A, A', A'', and C are independently H, C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy, linear or branched C_1 - C_{20} alkanoyl, C_1 - C_{20} alkoxycarbonyl, C_1 - C_{20} linear or branched alkoxy; C_1 - C_{20} linear or branched alkylamino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy; carboxyl, cyano, halo, hydroxy; and n, m, and p are independently integers from 0 to 3;

R''', R'''' and R''''' are independently H, C_1 - C_{20} linear or branched alkyl or alkenyl groups which may contain substituents, COOH C_1 - C_{20} alkoxycarbonyl, NH₂, CONH₂, C_1 - C_{20} acylamino, C_1 - C_{20} alkoxycarbonyl, OH, C_1 - C_{20} alkoxy, halo, or cyano. X = NH, O, S, S=O, or SO₂.

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- 2. A compound according to chaim I wherein C and A are hydrogen.
- 3. A compound according to claim 2 wherein q=2 and B is methyl.
- 4. A compound according to Claim 1 wherein A' is hydrogen and r = 0.
- 5. A compound according to Claim 1 wherein A" is hydrogen and s = 0.
- 6. A compound according to Claim 1 wherein R is hydrogen and R' is $-COOR_3$. wherein R_3 is hydrogen, a cation. C_1-C_{10} alkyl or C_5-C_{10} aryl.
- 7. A compound according to Claim 1 wherein X is oxygen; R"" is hydrogen; and R" and R"" are independently $COOR_3$ wherein R_3 is hydrogen, a cation, C_1 - C_{10} alkyl or C_5 - C_{10} aryl.
 - 8. The compound according to Claim 1 of the formula:

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9. A pharmaceutical composition containing a blood glucose lowering effective amount of a compound of formula I in a pharmaceutically acceptable carrier.

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wherein stereocenters \dagger are R or S;

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dotted lines indicate that a double bond may be present or absent, and the double bond geometry may be E or Z;



R and R' are independently H or C_1 - C_{20} linear or branched alkyl or alkenyl groups that may be substituted, or functional groups like COOR₃ where $R_3 = H$ or C_1 - C_{20} linear or branched alkyl or C_5 - C_{20} aryl; CONR₁R₂, where R₁ and R₂ may be independently or together H. linear or branched C_1 - C_{20} alkyl or C_5 - C_{20} aryl, NH₂, OH, C_1 - C_{20} linear or branched alkoxy, halo, cyano, or R+R'=O.

A, A', A'', and C are independently H, C_1 - C_2 0 acylamino, C_1 - C_{20} 0 acyloxy, linear or branched C_1 - C_{20} 0 alkanoyl, C_1 - C_{20} 0 alkoxycarbonyl. O_1 - O_2 0 linear or branched alkylamino, O_1 - O_2 0 alkylcarboxylamino, O_1 - O_2 0 carbalkoxy; carboxyl. cyano, halo, hydroxy; and n. m. and p are independently integers from 0 to 3;

B, B', and B" are independently H, C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy; C_1 - C_{20} linear or branched alkanoyl, C_1 - C_{20} linear or branched alkoxy; C_1 - C_{20} linear or branched alkoxy; C_1 - C_{20} linear or branched alkyl amino, C_1 - C_{20} alkyl carboxyl amino, C_1 - C_{20} carbalkoxy; aroyl, araalkanoyl, carboxyl, cyano, halo, hydroxy; and q, r and s are independently integers from 1 to 3;

R''', R'''' and R''''' are independently H. C_1 - C_{20} linear or branched alkyl or alkenyl groups which may contain substituents. COOH. C_1 - C_{20} alkoxycarbonyl, NH₂, CONH₂, C_1 - C_{20} acylamino, C_1 - C_{20} alkoxycarbonyl, OH, C_1 - C_{20} alkoxy, halo, or cyano. X = NH, O, S, S=O, or SO₂.

- 10. A composition according to Claim 9 wherein C and A are hydrogen.
- 11. A composition according to Claim 10 wherein q=2 and B is methyl.
- 12. A composition according to Claim 9 wherein A' is hydrogen and r = 0.
- 13. A composition according to Claim 9 wherein A" is hydrogen and s = 0.
- 14. A composition according to Claim 9 wherein R is hydrogen and R' is COOR₃, wherein R₃ is hydrogen, a cation, C₁-C₁₀ alkyl or C₅-C₁₀ aryl.

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- 15. A composition according to Claim 9 wherein X is oxygen; R" is hydrogen; and R" and R" are independently -COOR₃, wherein R_3 is hydrogen, a cation, C_1 - C_{10} alkyl or C_5 - C_{10} aryl.
 - 16. The composition according to Claim 9 wherein the compound comprises:

17. A method for lowering blood glucose in a subject comprising administering to said subject an effective blood glucose lowering amount of a composition containing a compound of the formula I in a pharmaceutically acceptable carrier.

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wherein stereocenters * are R or S;

dotted lines indicate that a double bond may be present or absent, and the double bond geometry may be E or Z;

R and R' are independently H or C_1 - C_{20} linear or branched alkyl or alkenyl groups that may be substituted, or functional groups like GOOR₃, where R_3 = H or C_1 - C_{20} linear or branched alkyl or C_5 - C_{20} aryl; CONR₁R₂, where R_1 and R_2 may be independently or together H, linear or branched C_1 - C_{20} alkyl or C_5 - C_{20} aryl, NH₂, OH, C_1 - C_{20} linear or branched alkoxy, halo, cyano, or R+R'=O.

A, A', A'', and C are independently H. C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy, linear or branched C_1 - C_{20} alkanoyl, C_1 - C_{20} alkoxycarbonyl, C_1 - C_{20} linear or branched alkoxy; C_1 - C_{20} linear or branched alkylamino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy; carboxyl, cyano, halo, hydroxy; and n, m, and p are inflependently integers from 0 to 3;

B, B', and B" are independently H_{1} , C_{1} - C_{20} acylamino, C_{1} - C_{20} acyloxy; C_{1} - C_{20} linear or branched alkanoyl, C_{1} - C_{20} linear or branched alkoxy; C_{1} - C_{20} linear or branched alkyl amino, C_{1} - C_{20} alkyl carboxyl amino, C_{1} - C_{20} carbalkoxy; aroyl, araalkanoyl, carboxyl, cyano, halo, hydroxy; and q, r and s are independently integers from 1 to 3;

R''', R'''' and R''''' are independently H. C_1 - C_{20} linear or branched alkyl or alkenyl groups which may contain substituents, COOH, C_1 - C_{20} alkoxycarbonyl, NH₂, CONH₂, C_1 - C_{20} acylamino, C_1 - C_{20} alkoxycarbonyl, OH, C_1 - C_{20} alkoxy, halo, or cyano. X = NH, O, S, S=O, or SO₂.

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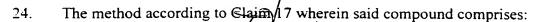
18. A method according to Claim 17 wherein C and A are hydrogen.

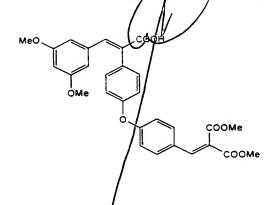
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- 19. A method according to Claim 18 wherein q=2 and B is methyl.
- 20. A method according to Claim 17 wherein A' is hydrogen and r = 0.
- 21. A method according to Claim 17 wherein A" is hydrogen and s = 0.

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A compound of the formula/II:

wherein stereocenters * 4re R or S;

dotted lines indicates that a double bond may be present or absent, and the double bond geometry may be E or Z;

A. A', and C are independently H, C₁-C₂₀ acylamino, C₁-C₂₀ acyloxy, C₁-C₂₀ alkoxycarbonyl, C₁-C₂₀ alkoxy, C₁-C₂₀ linear or branched alkyl amino, C₁-C₂₀

alkylcarboxylamino, C_1 - C_{20} carbalkoxy; carboxyl, cyano, halo, hydroxy; and t, u, and w are independently integers from 0 to 3;

B and B' are independently H. C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy; C_1 - C_{20} alkanoyl, C_1 - C_{20} alkenoyl, C_1 - C_{20} alkenoyl, C_1 - C_{20} alkenoyl, C_1 - C_{20} linear or branched alkoxy. C_1 - C_{20} linear or branched alkyl amino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy, C_6 - C_{20} aroyl, C_6 - C_{20} araalkanoyl, carboxyl, cyan, halo, hydroxy; and x and y are independently integers from 0 to 3:

R'. R'', and R''' are independently H or C_1 - C_{20} linear or branched alkyl or alkenyl groups which may contain substituents, COOH, C_1 - C_{20} alkoxycarbonyl, NH₂, CONH₂, C_1 - C_{20} acylamino, C_1 - C_{20} alkoxycarbonyl, OH, C_1 - C_{20} alkoxy, halo or cyano. X = NH, O, S, S=O, or SO₂

26. A pharmaceutically composition containing a blood glucose lowering effective amount of a compound of the formula // in a pharmaceutically acceptable carrier.

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wherein stereocenters * are/R or S;

dotted lines indicates that a double bond may be present or absent, and the double bond geometry may be E or Z;

A, A', and C are independently H, C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy, C_1 - C_{20} alkoxycarbonyl, C_1 - C_{20} alkoxy, C_1 - C_{20} linear or branched alkyl amino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy; carboxyl, cyano, halo, hydroxy; and t, u, and w are independently integers from 0 to 3;

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R'. R'', and R''' are independently H or C_1 - C_{10} linear or branched alkyl or alkenyl groups which may contain substituents. COOH. C_1 - C_{20} alkoxycarbonyl. NH₂, CONH₂, C_1 - C_{20} acylamino, C_1 - C_{20} alkoxycarbonyl, OH, C_1 - C_{20} alkoxy, halo or cyano. X = NH. O, S, S=O, or SO₂

27. A method for lowering blood glucose in a subject comprising administering to said subject an effective blood glucose lowering amount of a composition of the formula II.

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(BO) X (OB') Y R' C (OB') Y R'

wherein stereocenters * are R ρ r S;

dotted lines indicates that a double bond may be present or absent, and the double bond geometry may be E or Z:

A, A', and C are independently H, C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy, C_1 - C_{20} alkoxycarbonyl, C_1 - C_{20} alkoxy, C_1 - C_{20} linear or branched alkyl amino. C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy; carboxyl, cyano, halo, hydroxy; and t. u. and w are independently integers from 0 to $3\frac{1}{5}$

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B and B' are independently H, C_1 - C_{20} acylamino, G_1 - C_{20} acyloxy; C_1 - C_{20} alkanoyl, C_1 - C_{20} alkenoyl, C_1 - C_{20} alkenyl, C_1 - C_{20} alkoxycarbonyl, G_1 - G_2 0 linear or branched alkoxy, G_1 - G_2 0 linear or branched alkyl amino, G_1 - G_2 0 alkylcarboxylamino, G_1 - G_2 0 carbalkoxy, G_2 0 aroyl, G_2 0 aroyl, G_3 0 aroyl, carboxyl, cyan, halo, hydroxy; and x and y are independently integers from 0 to 3:

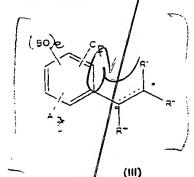
R', R'', and R''' are independently H or C_1 - C_{20} linear or branched alkyl or alkenyl groups which may contain substituents, COOH, C_1 - C_{10} alkoxycarbonyl, NH₂, CONH₂, C_1 - C_{20} acylamino, C_1 - C_{20} alkoxycarbonyl, OH, C_1 - C_{20} alkoxy, halo or cyano.

 $X = NH, O, S, S=O, or SO_2$

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28. A compound of the formula III.



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wherein stereocenters (designated by *) could be R- or S-.

dotted lines indicate that a double bond may be present or absent, and the double bond geometry may be E or Z;

A and C are independently H, C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy, C_1 - C_{20} linear or branched alkanoyl, C_1 - C_{20} alkoxycarbonyl, C_1 - C_{20} linear or branched alkyl amino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy; carboxyl, cyano, halo, hydroxy; thiol, SOR or SOR₂; and f and g are independently integers from 0 to 3;

B is independently H, C_1 – C_{20} acylamino, C_1 – C_{20} acyloxy; C_1 – C_{20} linear or branched alkanoyl, C_1 – C_{20} linear or branched alkenyl, C_1 – C_{20} alkoxycarbonyl, C_1 – C_{20} linear or branched alkoxy, C_1 – C_{20} linear or branched alkylamino, C_1 – C_{20} alkylcarboxylamino, C_1 – C_{20} carbalkoxy, C_5 – C_{20} aroyl, C_6 – C_{20} araalkanoyl, carboxyl, cyan, halo, hydroxy; and e is an integer from 1 to 3;

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29. A pharmaceutically composition containing a blood glucose lowering effective amount of a compound of the formula III in a pharmaceutically acceptable carrier.

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wherein stereocenters (designated y *) could be R- or S-.

dotted lines indicate that a double bond may be present or absent, and the double bond geometry may be E or Z;

A and C are independently H, C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy, C_1 - C_{20} linear or branched alkanoyl, C_1 - C_{20} alkoxycarbonyl, C_1 - C_{20} linear or branched alkyl amino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy; carboxyl, cyano. halo. hydroxy; thiol, SOR or SOR₂; and f and g are independently integers from 0 to 3;

B is independently H, C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy; C_1 - C_{20} linear or branched alkanoyl, C_1 - C_{20} linear or branched alkenyl, C_1 - C_{20} alkoxycarbonyl, C_1 - C_{20} linear or branched alkoxy, C_1 - C_{20} linear or branched alkyl amino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy, C_5 - C_{20} aroyl, C_6 - C_{20} araalkanoyl, carboxyl, cyan, halo, hydroxy; and e is an integer from 1 to 3;

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R', R'', and R''' are independently H or C_1 - C_{20} linear and branched alkyl or alkenyl groups which may contain substituents, COOH, C_1 - C_{20} alkoxycarbonyl, NH₂, CONH₂, C_1 - C_{20} acylamino, C_1 - C_{20} alkoxycarbonyl, OH, C_1 - C_{20} alkoxy, halo, cyano.

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30. A method for lowering blood glucose in a subject comprising administering to said subject an effective blood glucose lowering amount of a composition of the formula III.

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wherein stereocenters (designated by *) could be R- or S-.

dotted lines indicate that a double bond may be present or absent, and the double bond geometry may be E or Z;

A and C are independently H, C_1 - C_2 acylamino, C_1 - C_{20} acyloxy, C_1 - C_{20} linear or branched alkanoyl, C_1 - C_{20} alkoxycarbonyl, C_1 - C_{20} linear or branched alkyl amino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy; carboxyl, cyano, halo, hydroxy; thiol, SOR or SOR₂; and f and g are independently integers from 0 to 3;

B is independently H, C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy; C_1 - C_{20} linear or branched alkanoyl, C_1 - C_{20} linear or branched alkenyl, C_1 - C_{20} linear or branched alkenyl, C_1 - C_{20} alkoxycarbonyl, C_1 - C_{20} linear or branched alkoxy, C_1 - C_{20} linear or branched alkyl amino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy, C_5 - C_{20} aroyl, C_6 - C_{20} araalkanoyl, carboxyl, cyan, halo, hydroxy; and e is an integer from 1 to 3;

R', R'', and R''' are independently H or C_1 - C_{20} linear and branched alkyl or alkenyl groups which may contain substituents, COOH, C_1 - C_{20} alkoxycarbonyl, NH₂, CONH₂, C_1 - C_{20} acylamino, C_1 - C_{20} alkoxycarbonyl, OH, C_1 - C_{20} alkoxy, halo, cyano.

31. A pharmaceutical composition containing a serum triglyceride lowering effective amount of a compound of formula I in a pharmaceutically acceptable carrier.

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wherein stereocenters * are R or S;

dotted lines indicate that a double bond may be present or absent, and the double bond geometry may be E or Z;

R and R' are independently H or C_1/C_{20} linear or branched alkyl or alkenyl groups that may be substituted, or functional groups like COOR₃, where $R_3 = H$ or C_1-C_{20} linear or branched alkyl or C_5-C_{20} aryl; CONR₁R₂, where R₁ and R₂ may be independently or together H, linear or branched C_1-C_{20} alkyl or C_5-C_{20} aryl, NH₂, OH, C_1-C_{20} linear or branched alkoxy, halo, cyano, or R+R'=O.

A, A', A'', and C are independently H, C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy, linear or branched C_1 - C_{20} alkanoyl, C_1 - C_{20} alkoxycarbonyl, C_1 - C_{20} linear or branched alkoxy; C_1 - C_{20} linear or branched alkylamino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy; carboxyl, cyano, halo, hydroxy; and n, m, and p are independently integers from 0 to 3;

B, B', and B" are independently H, C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy; C_1 - C_{20} linear or branched alkanoyl, C_1 - C_{20} linear or branched alkoxy; C_1 - C_{20} linear or branched alkoxy; C_1 - C_{20} linear or branched alkyl amino, C_1 - C_{20} alkyl carboxyl amino, C_1 - C_{20} carbalkoxy; aroyl, araalkanoyl, carboxyl, cyano, halo, hydroxy; and q, r and s are independently integers from 1 to 3;

R''', R'''' and R''''' are independently H. C_1 - C_{20} linear or branched alkyl or alkenyl groups which may contain substituents. COOH, C_1 - C_{20} alkoxycarbonyl, NH₂, CONH₂, C_1 - C_{20} acylamino, C_1 - C_{20} alkoxycarbonyl, OH, C_1 - C_{20} alkoxy, halo, or cyano. X = NH, O, S, S=O, or SO₂.

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- 32. A composition according to Claim 31 wherein C and A are hydrogen.
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- 33. A composition according to Claim 32 wherein q=2 and B is methyl.
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- 34. A composition according to Claim/31 wherein A' is hydrogen and r = 0.
- 35.
 - 35. A composition according to Claim 31 wherein A" is hydrogen and s = 0.
 - 36. A composition according to Claim 31 wherein R is hydrogen and R' is $COOR_3$, wherein R_3 is hydrogen, a cation, C/C_{10} alkyl or C_5-C_{10} aryl.
 - 37. A composition according to Claim 31 wherein X is oxygen; R"" is hydrogen; and R" and R" are independently -COOR₃. Wherein R_3 is hydrogen, a cation, C_1 - C_{10} alkyl or C_5 - C_{10} aryl.
 - 38. The composition according to Claim 31 wherein the compound comprises:

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MeO COOMe COOMe

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- 39. A method for lowering serum triglyceride in a subject comprising administering to said subject an effective serum triglyceride lowering amount of a

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composition containing a compound of the formula I in a pharmaceutically acceptable carrier.

wherein stereocenters * are R or S;

dotted lines indicate that a double bond may be present or absent, and the double bond geometry may be E or Z;

R and R' are independently H or C_1 - C_{20} linear or branched alkyl or alkenyl groups that may be substituted, or functional groups like COOR₃, where $R_3 = H$ or C_1 - C_{20} linear or branched alkyl or C_5 - C_{20} aryl; $CONR_1R_2$, where R_1 and R_2 may be independently or together H, linear or branched C_1 - C_{20} alkyl or C_5 - C_{20} aryl, NH_2 , OH, C_1 - C_{20} linear or branched alkoxy, halo, cyano, or R+R'=0.

A, A', A'', and C are independently H, C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy, linear or branched C_1 - C_{20} alkanoyl, C_1 - C_{20} alkoxycarbonyl, C_1 - C_{20} linear or branched alkylamino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy; carboxyl, cyano, halo, hydroxy; and n, m, and p are independently integers from 0 to 3;

B, B', and B" are independently H, C₁-C₂₀ acylamino, C₁-C₂₀ acyloxy; C₁-C₂₀ linear or branched alkanoyl, C_1 - C_{20} linear or branched alkenyl, C_1 - C_{20} alkoxycarbonyl, C_1 - C_{20} linear or branched alkoxy; C_1 - C_{20} linear or branched alkyl amino, C_1 - C_{20} alkyl carboxyl amino, C_1 , C_{20} carbalkoxy; aroyl, araalkanoyl, carboxyl, kyano, halo, hydroxy; and q, r and s are independently integers from 1 to 3;

R''', R'''' and R''''' are independently H, C_1 - $\not C_{20}$ linear or branched alkyl or alkenyl groups which may contain substituents, COOH. C_1 - Q_{20} alkoxycarbonyl, NH₂, CONH₂, C_1 - C_{20} acylamino, C_1 - C_{20} alkoxycarbonyl, OH, C_1 - C_{20} alkoxy, halo, or cyano. $X = NH, O, S, S=O, or SO_2.$

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A method according to Claim, 39 wherein C and A are hydrogen. 40.

- A method according to Claim 40 wherein q=2 and B is methyl.
- A method according to Claim/39 wherein A' is hydrogen and r = O. 42.
- A method according to Claim 39 wherein A" is hydrogen and s = 0. 43.
- A method according to Claim 39 wherein R is hydrogen and R is -COOR₃. 44. wherein R_3 is hydrogen, a cation, C_1 - C_{10} /alkyl or C_5 - C_{10} aryl.
- A method according to Claim 39 in formula I wherein X is oxygen; R" is 45. hydrogen; and R" are independently -COOR3, wherein R3 is hydrogen, a cation, C1- C_{10} alkyl or C_5 - C_{10} aryl.

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The method according to Claim 39 wherein said compound comprises: 46.

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wherein stereocenters * are R or S;

dotted lines indicates that a double bond may be present or absent, and the double bond geometry may be E or Z;

A, A', and C are independently H. C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy, C_1 - C_{20} alkoxycarbonyl, C_1 - C_{20} alkoxy, C_1 - C_{20} linear or branched alkyl amino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy; carboxyl, cyano, halo, hydroxy; and t, u, and w are independently integers from 0 to 3;

B and B' are independently H, C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy; C_1 - C_{20} alkanoyl, C_1 - C_{20} alkenoyl, C_1 - C_{20} alkenoyl, C_1 - C_{20} alkenoyl, C_1 - C_{20} linear or branched alkoxy, C_1 - C_{20} linear or branched alkyl amino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy, C_6 - C_{20} aroyl, C_6 - C_{20} araalkanoyl, carboxyl, cyan, halo, hydroxy; and x and y are independently integers from 0 to 3;

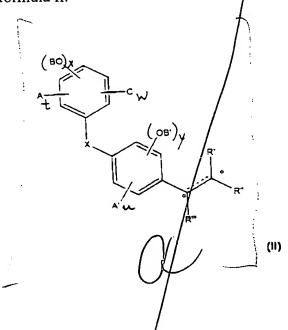
R', R'', and R''' are independently H or C_1 - C_{20} linear or branched alkyl or alkenyl groups which may contain substituents, COOH, C_1 - C_{20} alkoxycarbonyl, NH₂, CONH₂, C_1 - C_{20} acylamino, C_1 - C_{20} alkoxycarbonyl, OH, C_1 - C_{20} alkoxy, halo or cyano. X = NH, O, S, S=O, or SO₂

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48. A method for lowering serum triglyceride in a subject comprising administering to said subject an effective serum triglyceride lowering amount of a composition of the formula II.

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wherein stereocenters * are R or S

dotted lines indicates that a double bond may be present or absent, and the double bond geometry may be E or Z;

A. A', and C are independently H. C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy, C_1 - C_{20} alkoxycarbonyl, C_1 - C_{20} alkoxy, C_1 - C_{20} linear or branched alkyl amino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy; carboxyl, cyano, halo, hydroxy; and t, u, and w are independently integers from 0 to 3;

B and B' are independently H, C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy; C_1 - C_{20} alkanoyl, C_1 - C_{20} alkenoyl, C_1 - C_{20} alkenyl, C_1 - C_{20} alkoxycarbonyl, C_1 - C_{20} linear or branched alkoxy, C_1 - C_{20} linear or branched alkyl amino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy, C_6 - C_{20} aroyl, C_6 - C_{20} araalkanoyl, carboxyl, cyan, halo, hydroxy; and x and y are independently integers from 0 to 3;

R', R'', and R''' are independently H or C_1 - C_{20} linear or branched alkyl or alkenyl groups which may contain substituents, COOH, C_1 - C_{20} alkoxycarbonyl, NH₂, CONH₂, C_1 - C_{20} acylamino, C_1 - C_{20} alkoxycarbonyl, OH, C_1 - C_{20} alkoxy, halo or cyano. X = NH, O, S, S=O, or SO₂

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A pharmaceutically composition containing a serum triglyceride lowering effective amount of a compound of the formula III in a pharmaceutically acceptable carrier.

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wherein stereocenters (designated by */ could be R- or S-.

dotted lines indicate that a double bond may be present or absent, and the double bond geometry may be E or Z;

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A and C are independently H, C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy, C_1 - C_{20} linear or branched alkanoyl, C₁-C₂₀ alkoxycarbonyl, C₁-C₂₀ linear or branched alkoxy, C₁-C₂₀ linear or branched alkyl amino, C₁-C₂₀ alkylcarbo ylamino, C₁-C₂₀ carbalkoxy; carboxyl, cyano, halo, hydroxy; thiol, SOR or SOR₂; and f and g are independently integers from 0 to 3;

B is independently H, C_1 - C_{20} adylamino, C_1 - C_{20} acyloxy; C_1 - C_{20} linear or branched alkanoyl, C₁-C₂₀ linear or branched alkenoyl, C₁-C₂₀ linear or branched alkenyl, C₁-C₂₀ alkoxycarbonyl, C₁-C₂₀ linear or branched alkoxy, C₁-C₂₀ linear or branched alkyl amino, C₁-C₂₀ alkylcarboxylamino, C₁-C₂₀ carbalkoxy, C₅-C₂₀ aroyl, C₆-C₂₀ araalkanoyl, carboxyl, cyan, halo, hydroxy; and e is an integer from 1 to 3;

R', R'', and R''' are independently H or C₁-C₂₀ linear and branched alkyl or alkenyl groups which may contain substituents, COOH, C1-C20 alkoxycarbonyl, NH2, CONH2, C1-C₂₀ acylamino, C₁-C₂₀ alkoxycarbonyl, OH, C₁-C₂₀ alkoxy, halo, cyano.

A method for/lowering serum triglyceride in a subject comprising 50. administering to said subject an effective serum triglyceride lowering amount of a composition of the formula III.

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wherein stereocenters (designated by *) could be R- or S-.

dotted lines indicate that a double bond/may be present or absent, and the double bond geometry may be E or Z;

A and C are independently H, C($-C_{20}$ acylamino, C_1 - C_{20} acyloxy, C_1 - C_{20} linear or branched alkanoyl, C_1 - C_{20} alkoxycarboxyl C_1 - C_{20} linear or branched alkoxy, C_1 - C_{20} linear or branched alkyl amino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy; carboxyl, cyano, halo, hydroxy; thiol, SOR or SOR₂; and f and/g are independently integers from 0 to 3;

B is independently H, C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy; C_1 - C_{20} linear or branched alkanoyl, C_1 - C_{20} linear or branched alkenyl, C_1 - C_{20} alkoxycarbonyl, C_1 - C_{20} linear or branched alkoxy, C_1 - C_{20} linear or branched alkyl amino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy, C_5 - C_{20} aroyl, C_6 - C_{20} araalkanoyl, carboxyl, cyan, halo, hydroxy; and e is an integer from 1 to 3;

R', R'', and R''' are independently H or C₁-C₂₀ linear and branched alkyl or alkenyl groups which may contain substituents, COOH, C₁-C₂₀ alkoxycarbonyl, NH₂, CONH₂, C₁-C₂₀ acylamino, C₁-C₂₀ alkoxycarbonyl, OH, C₁-C₂₀ alkoxy, halo, cyano.

51. A pharmaceutical composition containing a blood pressure lowering effective amount of a compound of formula I in a pharmaceutically acceptable carrier.

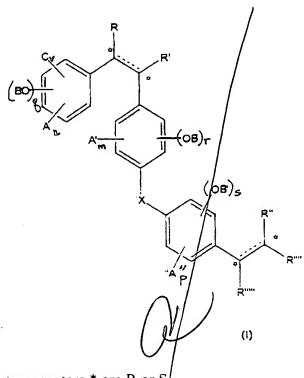
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wherein stereocenters * are R or S

dotted lines indicate that a double/bond may be present or absent, and the double bond geometry may be E or Z;

R and R' are independently H or C_1 - C_{20} linear or branched alkyl or alkenyl groups that may be substituted, or functional groups like COOR₃, where $R_3 = H$ or C_1 - C_{20} linear or branched alkyl or C₅-C₂₀ aryl; CONR₁R₂, where R₁ and R₂ may be independently or together H, linear or branched C_1 - C_{20} alkyl or Q_5 - C_{20} aryl, NH₂, OH, C_1 - C_{20} linear or branched alkoxy, halo, cyano, or R+R'=O.

A, A', A'', and C are independently H, C₁-C₂₀ acylamino, C₁-C₂₀ acyloxy, linear or branched C₁-C₂₀ alkanoyl, C₁-C₂₀ alkoxycarbonyl, C₁-C₂₀ linear or branched alkoxy; C₁-C₂₀ linear or branched alkylamino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy; carboxyl, cyano, halo, hydroxy; and n, m, and p are independently integers from 0 to 3;

B, B', and B" are independently H, C₁-C₂₀ acylamino, C₁-C₂₀ acyloxy; C₁-C₂₀ linear or branched alkanoyl, C₁-C₂₀ linear or branched alkenyl, C₁-C₂₀ alkoxycarbonyl, C₁-C₂₀ linear or branched alkoxy; C₁-C₂₀ linear or branched alkyl amino, C₁-C₂₀ alkyl carboxyl amino, C1.C20 carbalkoxy; aroyl! araalkanoyl, carboxyl, cyano, halo, hydroxy; and q, r and s are independently integers from 1 to 3;

R''', R'''' and R''''' are independently H. C₁-C₂₀ linear or branched alkyl or alkenyl groups which may contain substituents, COOH, C₁-C₂₀ alkoxycarbonyl, NH₂, CONH₂, C₁- C_{20} acylamino, C_1 - C_{20} alkoxycarbonyl, OH. C_1 - C_{20} alkoy, halo, or cyano. $X = NH, O, S, S=O, or SO_2.$

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A composition according to Claim 51 wherein C and A are hydrogen. 52.

A composition according to Claim \$\frac{1}{2}\$ wherein q=2 and B is methyl. 53.

A composition according to Claim 51 wherein A' is hydrogen and r = 0. 54.

A composition according to C_1 wherein A" is hydrogen and s = 0. 55.

56. A composition according to Claim 51 wherein R is hydrogen and R' is -COOR₃, wherein R₃ is hydrogen, a cation, $C_1 - C_{10}$ alkyl or C₅-C₁₀ aryl.

A composition according to Claim 51 wherein X is oxygen; R" is hydrogen; 57. and R" are independently -COOR3, wherein R3 is hydrogen, a cation, C1-C10 alkyl or C₅-C₁₀ aryl.

The composition according to Claim 51 wherein the compound comprises: 58.

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59. A method for lowering blood pressure in a subject comprising administering to said subject an effective blood pressure lowering amount of a composition containing a compound of the formula I in a pharmaceutically acceptable carrier.

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wherein stereocenters * are R or S;

dotted lines indicate that a double bond may be present or absent, and the double bond geometry may be E or Z;

R and R' are independently H or C_1 - C_{20} linear or branched alkyl or alkenyl groups that may be substituted, or functional groups like COOR₃, where $R_3 = H$ or C_1 - C_{20} linear or branched alkyl or C_5 - C_{20} aryl; CONR₁R₂, where R₁ and R₂ may be independently or together H. linear or branched C_1 - C_{20} alkyl or C_5 - C_{20} aryl, NH₂, OH, C_1 - C_{20} linear or branched alkoxy, halo, cyano, or R+R'=O.

A, A', A'', and C are independently H, C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy, linear or branched C_1 - C_{20} alkanoyl, C_1 - C_{20} alkoxycarbonyl, C_1 - C_{20} linear or branched alkoxy; C_1 - C_{20} linear or branched alkylamino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy; carboxyl, cyano, halo, hydroxy; and n, m, and p are independently integers from 0 to 3;

R''', R'''' and R''''' are independently H, C_1 - C_{20} linear or branched alkyl or alkenyl groups which may contain substituents, COOH. C/-C₂₀ alkoxycarbonyl, NH₂, CONH₂, C₁- C_{20} acylamino, C_1 - C_{20} alkoxycarbonyl, OH, C_1 - Q_{20} alkoxy, halo, or cyano. $X = NH, O, S, S=O, or SO_2.$

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A method according to Claim 59 wherein C and A are hydrogen. 60.

A method according to Plaim 60 wherein q=2 and B is methyl. 61.

62. A method according to Clahm 59 wherein A' is hydrogen and r = 0.

A method according to Claim 59 wherein A" is hydrogen and s = 0. 63.

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A method according to Claim 59 wherein R is hydrogen and R' is -COOR₃. wherein R_3 is hydrogen, a cation, C_1 - C_{10} -alkyl or C_5 - C_{10} aryl.

A method according to Claim 59 in formula I wherein X is oxygen; R" is 65. hydrogen; and R" and R" are independently -COOR₃, wherein R₃ is hydrogen, a cation, C₁- C_{10} alkyl or C_5 - C_{10} aryl.

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The method according to Claim 59 wherein said compound comprises: 66.

67. A pharmaceutically composition containing a blood pressure lowering effective amount of a compound of the formula II in a pharmaceutically acceptable carrier.

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wherein stereocenters * are R or S;

dotted lines indicates that a double bond may be present or absent, and the double bond geometry may be E or Z;

A. A', and C are independently H/ C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy, C_1 - C_{20} alkoxycarbonyl, C_1 - C_{20} alkoxy, C_1 - C_{20} linear or branched alkyl amino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy; carboxyl, cyano, halo, hydroxy; and t, u, and w are independently integers from 0 to 3;

B and B' are independently H, C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy; C_1 - C_{20} alkanoyl, C_1 - C_{20} alkenoyl, C_1 - C_{20} alkenoyl, C_1 - C_{20} alkenoyl, C_1 - C_{20} alkenoyl, C_1 - C_{20} linear or branched alkoxy, C_1 - C_{20} linear or branched alkyl amino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy, C_6 - C_{20} aroyl, C_6 - C_{20} araalkanoyl, carboxyl, cyan, halo, hydroxy; and x and y are independently integers from 0 to 3;

R', R'', and R''' are independently H or C_1 - C_{20} linear or branched alkyl or alkenyl groups which may contain substituents, COOH, C_1 - C_{20} alkoxycarbonyl, NH₂, CONH₂, C_1 - C_{20} acylamino, C_1 - C_{20} alkoxycarbonyl, OH, C_1 - C_{20} alkoxy, halo or cyano. X = NH, O, S, S=O, or SO₂

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68. A method for lowering blood pressure in a subject comprising administering to said subject an effective blood pressure lowering amount of a composition of the formula II.

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wherein stereocenters * are R/or S;

dotted lines indicates that a double bond may be present or absent, and the double bond geometry may be E or Z;

A. A', and C are independently H, C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy, C_1 - C_{20} alkoxycarbonyl, C_1 - C_{20} alkoxy, C_1 - C_{20} linear or branched alkyl amino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy; carboxyl, cyano, halo, hydroxy; and t, u, and w are independently integers from 0 to 3;

B and B' are independently H, C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy; C_1 - C_{20} alkanoyl, C_1 - C_{20} alkenoyl, C_1 - C_{20} alkenoyl, C_1 - C_{20} alkenoyl, C_1 - C_{20} alkenoyl, C_1 - C_{20} linear or branched alkyl amino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy, C_6 - C_{20} aroyl, C_6 - C_{20} araalkanoyl, carboxyl, cyan, halo, hydroxy; and x and y are independently integers from 0 to 3;

R', R'', and R'' are independently H or C_1 - C_{20} linear or branched alkyl or alkenyl groups which may contain substituents, COOH, C_1 - C_{20} alkoxycarbonyl, NH₂, CONH₂, C_1 - C_{20} acylamino, C_1 - C_{20} alkoxycarbonyl, OH, C_1 - C_{20} alkoxy, halo or cyano. X = NH, O, S, S=O or SO₂

69. A pharmaceutically composition containing a blood pressure lowering effective amount of a compound of the formula III in a pharmaceutically acceptable carrier.

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wherein stereocenters (designated by/*) could be R- or S-.

dotted lines indicate that a double bond may be present or absent, and the double bond geometry may be E or Z;

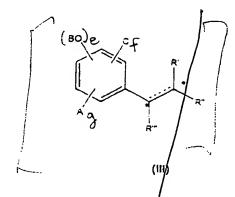
A and C are independently H, C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy, C_1 - C_{20} linear or branched alkanoyl, C_1 - C_{20} alkoxycarbonyl, C_1 - C_{20} linear or branched alkyl amino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy; carboxyl, cyano, halo, hydroxy; thiol, SOR or SOR₂; and f and g are independently integers from 0 to 3;

B is independently H, C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy; C_1 - C_{20} linear or branched alkanoyl, C_1 - C_{20} linear or branched alkenyl, C_1 - C_{20} alkoxycarbonyl, C_1 - C_{20} linear or branched alkoxy, C_1 - C_{20} linear or branched alkyl amino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy, C_5 - C_{20} aroyl, C_6 - C_{20} araalkanoyl, carboxyl, cyan, halo, hydroxy; and e is an integer from 1 to 3;

R', R'', and R''' are independently H or C_1 - C_{20} linear and branched alkyl or alkenyl groups which may contain substituents, COOH, C_1 - C_{20} alkoxycarbonyl, NH₂, CONH₂, C_1 - C_{20} acylamino, C_1 - C_{20} alkoxycarbonyl, OH, C_1 - C_{20} alkoxy, halo, cyano.

70. A method for lowering blood pressure in a subject comprising administering to said subject an effective blood pressure lowering amount of a composition of the formula III.

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wherein stereocenters (designated by *) could be R- or S-.

dotted lines indicate that a double bond may be present or absent, and the double bond geometry may be E or Z;

A and C are independently H, C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy, C_1 - C_{20} linear or branched alkanoyl, C_1 - C_{20} alkoxycarbonyl, C_1 - C_{20} linear or branched alkyl amino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy; carboxyl, cyano, halo, hydroxy; thiol, SOR or SOR₂; and f and g are independently integers from 0 to 3;

B is independently H, C_1 - C_{20} acylamino, C_1 - C_{20} acyloxy; C_1 - C_{20} linear or branched alkanoyl, C_1 - C_{20} linear or branched alkenyl, C_1 - C_{20} alkoxycarbonyl, C_1 - C_{20} linear or branched alkoxy, C_1 - C_{20} linear or branched alkyl amino, C_1 - C_{20} alkylcarboxylamino, C_1 - C_{20} carbalkoxy, C_5 - C_{20} aroyl, C_6 - C_{20} araalkanoyl, carboxyl, cyan, halo, hydroxy; and e is an integer from 1 to 3;

R', R'', and R''' are independently H or C_1 - C_{20} linear and branched alkyl or alkenyl groups which may contain substituents, COOH, C_1 - C_{20} alkoxycarbonyl, NH₂, CONH₂, C_1 - C_{20} acylamino, C_1 - C_{20} alkoxycarbonyl, OH, C_1 - C_{20} alkoxy, halo, cyano.

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